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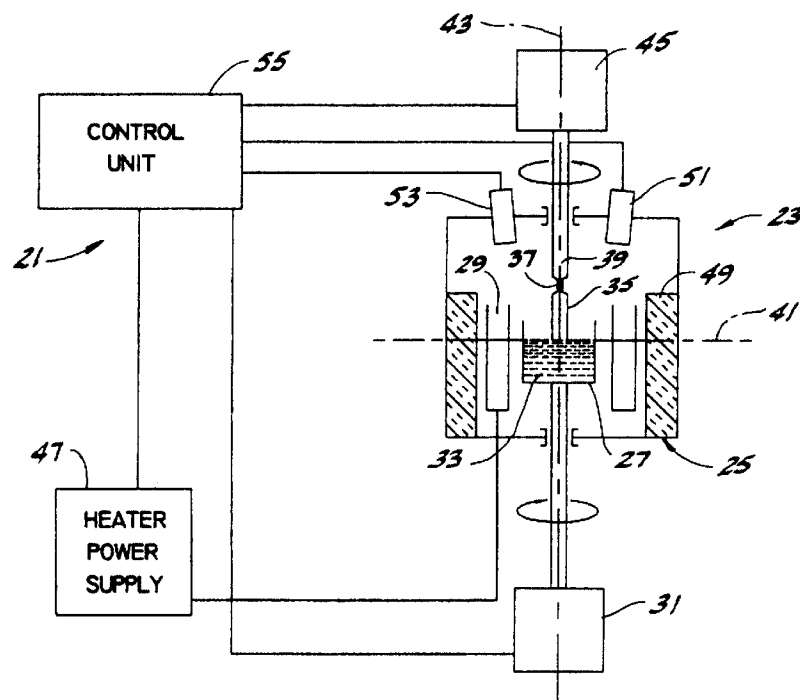
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(54) **System and method for controlling growth of a silicon crystal**

(57) System and method for determining the diameter of a silicon crystal being pulled from a silicon melt for controlling a silicon crystal growing apparatus. The melt has a surface with a meniscus which is visible as a bright ring adjacent the crystal. A camera generates an image pattern of a portion of the bright ring adjacent the crystal. Image processing circuitry detects a char-

acteristic of the image pattern and defines an edge of the bright ring as a function of the detected characteristic. The image processing circuitry further defines a generally circular shape including the defined edge of the bright ring. The diameter of the crystal is then determined based on the diameter of the defined shape for use in controlling the crystal growing apparatus.

FIG. 1

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X,D Y	EP 0 472 907 A (SHINETSU HANDOTAI KK) * column 2, line 21 - line 37; figure 11 * * column 8, line 45 - column 9, line 28; figures 5-7 * & US 5 240 684 A ---	1,8,10 2,7,9	G01B11/10
Y A	EP 0 599 350 A (SHINETSU HANDOTAI KK) * column 5, line 9 - column 6, line 47; figures 1,2A-2D,3 * ---	2 1,10	
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A	EP 0 444 628 A (SHINETSU HANDOTAI KK) * the whole document * -----	1,7,9,10	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G01B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 March 1998	Examiner Arca, G
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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